

REMARKS

Claims 35, 36, 39–43, and 46–49 are pending in this application. Non-elected claims 42 and 43 have been withdrawn from consideration by the Examiner. By this Amendment, claims 35, 36, and 39–43 are amended, claims 37, 38, 44, and 45 are canceled, and claims 46–49 are added. Support for the amendments to the claims may be found, for example, in the specification at page 276, line 1 to page 278, line 4, except that 1,3-dimethyl-2-imidazolidinone is described in Example 6. No new matter is added.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Rejection under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 35–41 as being indefinite under 35 U.S.C. §112, second paragraph. By this Amendment, claims 35 and 36 are amended to recite:

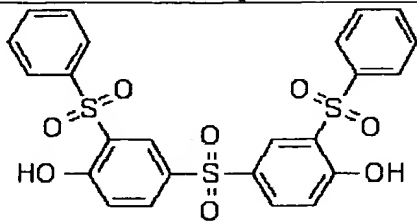
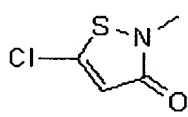
...the organic compound and phenol derivative are reacted under conditions sufficient to form the clathrate compounds having the phenol derivative as a constituent, the constituent being a host compound and the organic compound being a guest compound;
and

the host and guest compounds are non-covalently bonded to each other, and when the host and guest compounds are not bonded to each other, they are able to exist stably on their own.

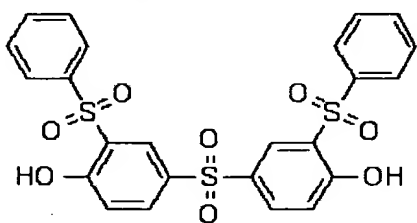
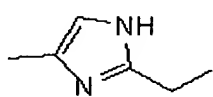
Support for these amendment may be found, for example, in the specification at page 5, lines 8–12.

The following host compounds and guest compounds are used in Applicants' Examples and Comparative Examples.

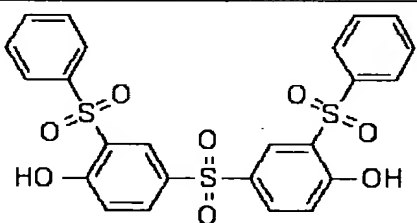

Examples 1-3:

Host compound	Guest compound
	

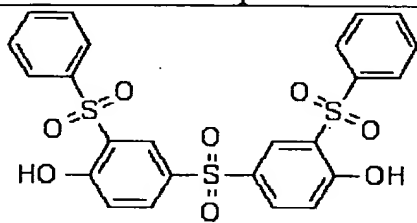
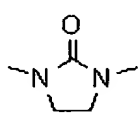
Example 4:

Host compound	Guest compound
	

Example 5:

Host compound	Guest compound
	

Example 6:

Host compound	Guest compound
	

Example 7:

Host compound	Guest compound

Example 8:

Host compound	Guest compound

Example 9:

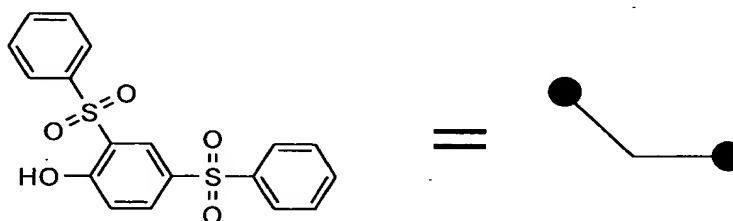
Host compound	Guest compound

Comparative Examples:

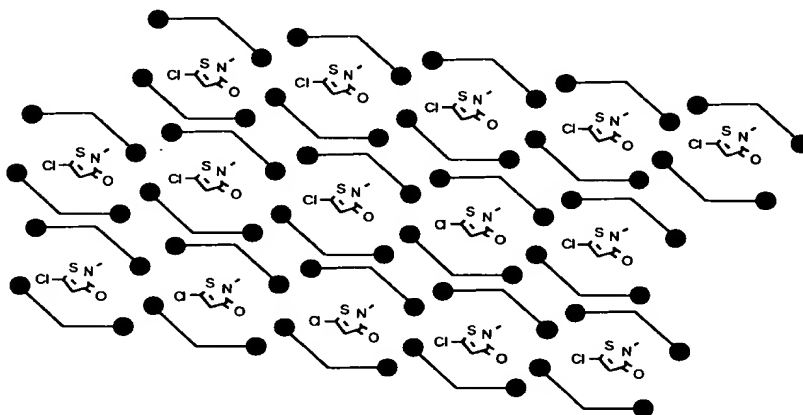
Host compounds	

The claimed invention provides a clathrate compound in which two or more molecules of a host compound are bonded by hydrogen bond to form a space to contain a guest compound.

For example, in Example 8, a compound of 2,4-bis(phenylsulfonyl)phenol represented by the following formula was used as a host compound:



In this compound, since the hydroxyl group of phenyl group and the two SO₂ groups are not positioned in a straight line, namely, make a curved/bent line, two molecules of the host compound are able to form a container-like space that is able to contain a guest compound. The structure of the clathrate compound in Example 8 may be drawn as follows:



Similarly, in the compound of 3,3'-bis(phenylsulfonyl)-4,4' dihydroxydiphenyl sulfone used as a host compound in Examples 1-7, since the two hydroxyl groups of the phenyl groups and the three SO₂ groups are not positioned in a straight line, two molecules of the host compound are able to form a container-like space which is able to contain a guest compound.

Therefore, in the claimed invention, a clathrate compound can be obtained by reacting a host compound represented by formulas (I) or (IV) with a guest compound.

In contrast, for example, in Comparative Example 1, since the compound of 4,4'-dihydroxydiphenyl sulfone was used instead of 3,3'-bis(phenylsulfonyl)-4,4' dihydroxydiphenyl sulfone has a linear structure and, thus, two molecules of the compound are not able to form a container-like space to contain a guest compound. Therefore, the compounds used in Comparative Examples 1-3 cannot form a clathrate compound even though they have hydroxyl groups and SO₂ groups.

With respect to the guest compound, Applicants submit that the guest compound is not specifically limited as long as a host compound has the above described technical features, and that the guest compounds disclosed in Examples 1-9 are sufficient to support the scope of the guest compound in claims 35 and 36.

Based on the above, and the previous arguments and Rule 132 Declaration made of record, Applicants submit that the claims are not indefinite. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejections Under 35 U.S.C. §102

A. Preshad

The Office Action rejects claims 35 and 39 under 35 U.S.C. §102(b) over Preshad.

Applicants respectfully traverse the rejection.

Claims 35 and 39	Preshad et al.
<p style="text-align: center;">(I)</p>	<p style="text-align: center;">Ac—O—Ph</p>

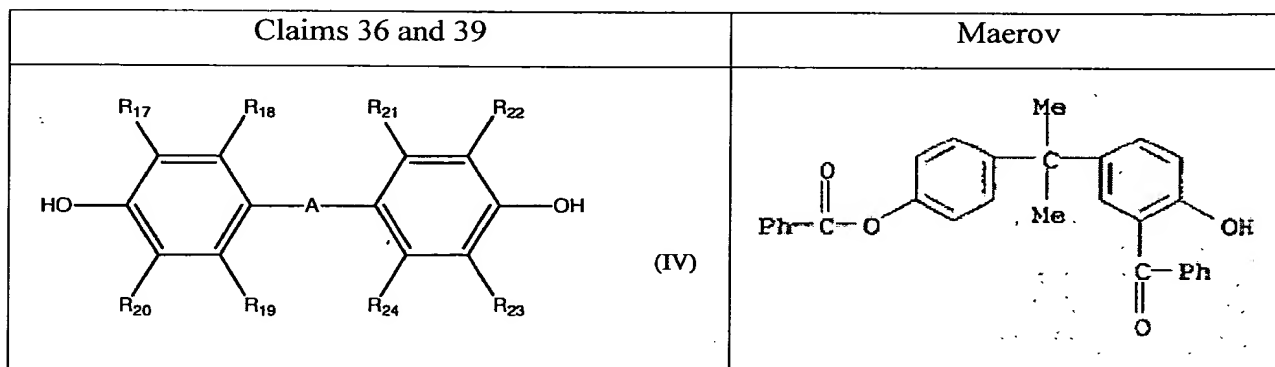
Claim 35 requires that "R₁ and R₃ are independently selected from -SO₂-Y and -CO-Z."

The compound of Preshad relied upon by the Office Action does not meet this requirement.

Preshad fails to expressly or inherently teach that its compound is a clathrate compound. The Office Action asserts that a clathrate compound can be formed by adding Preshad's compound to a solvent in which it is not soluble, but does not indicate where Preshad teaches this. Thus, the Office Action fails to establish that Preshad anticipates the rejected claims. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Maerov

The Office Action rejects claims 36 and 39 under 35 U.S.C. §102(b) over Maerov. Applicants respectfully traverse the rejection.



The Office Action asserts that the compound of Maerov can be the reaction product between a compound of Formula (IV) and benzoic acid. Applicants respectfully request that the Examiner provides documentary evidence to support its naked assertion.

Maerov fails to expressly or inherently teach that its compound is a clathrate compound. The Office Action asserts that a clathrate compound can be formed by adding Maerov's compound to a solvent in which it is not soluble, but does not indicate where Maerov teaches this. Thus, the Office Action fails to establish that Maerov anticipates the rejected claims. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

C. Havens

The Office Action rejects claims 37 and 39 under 35 U.S.C. §102(b) over Havens. By this Amendment, claim 37 is canceled, rendering the rejection moot.

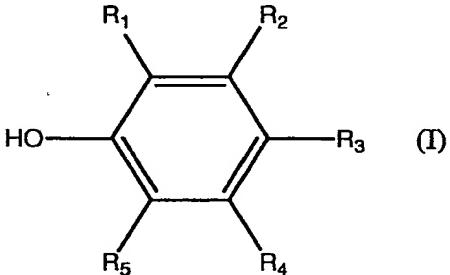
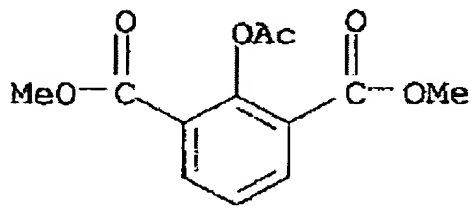
D. Kaiser

The Office Action rejects claims 38 and 39 under 35 U.S.C. §102(b) over Kaiser. By this Amendment, claim 38 is canceled, rendering the rejection moot.

E. Yamakazi

The Office Action rejects claims 40 and 41 under 35 U.S.C. §102(b) over Yamakazi.

Applicants respectfully traverse the rejection.

Claims 40 and 41	Yamakazi
 <p style="text-align: center;">(I)</p>	

The Office Action asserts that the compound of Yamakazi can be the reaction product between a compound of Formula (I) and acetic acid. Applicants respectfully request that the Examiner provides documentary evidence to support its naked assertion.

Yamakazi fails to expressly or inherently teach that its compound is a clathrate compound. The Office Action asserts that a clathrate compound can be formed by adding Yamakazi's compound to a solvent in which it is not soluble, but does not indicate where Yamakazi teaches this. Thus, the Office Action fails to establish that Yamakazi anticipates the rejected claims. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Rejoinder

Applicants respectfully request rejoinder of the withdrawn method claims upon allowance of the elected claims.

IV. New Claims

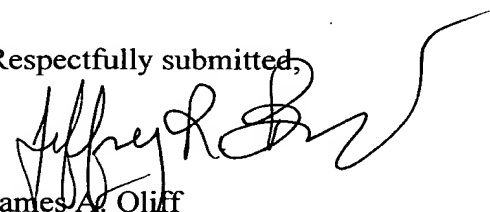
By this Amendment, claims 46-49 are added, which variously depend from either claim 35 or 36. These new claims read on the elected invention, and distinguish over the applied references at least for the reasons discussed above. Examination and allowance of these new claims are respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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